

Chico

**Golden
Empire
Amateur
Radio
Society, Inc.**

www.gearsww6rhc.org

"Dedicated to Public Service"

THE RADIATOR

W6RHC
IRLP #8170

P.O. Box 202 Chico, CA 95927

March 2021 Newsletter

GEARS Founded August 13, 1939

Many GEARS members have received COVID vaccinations.

If you haven't signed up yet go to:

<http://www.buttecounty.net/ph/COVID19/vaccine>

The sooner GEARS members are vaccinated, the sooner we can start holding in person meetings again. Hopefully this summer!

On the GEARS General Meeting Zoom call, we had a great presentation of HF bands and conditions by Larry Mitchell KF6NCX. You can watch the meeting here: <https://youtu.be/OsGt66xxJ8M>

Gene Wright, WA6ZRT held an antenna workshop on February 21st at the Chico Elks Lodge. We had a nice group, and it was fun to see many of you again.

Field Day will be June 26-27. We have reserved the Masonic Lodge again this year.

In this issue, Kent Hastings WA6ZFY explains Butte Count CERT involvement. If you need more information contact him.

I want to thank everyone who paid their GEARS 2021 dues. Your support keeps our club alive.

The GEARS Board of Directors has moved the meeting to Wednesday evenings to better accommodate our busy schedules.

Happy March Birthdays to Members Lary Dorn N7MRN and Margie Wolske KJ6SEV.

Things are looking better this year. I hope to see all of you sometime soon. Take care and stay safe.



'73

Jim Matthews K6EST

jiminchico@yahoo.com

530-893-3314



Join GEARS on Facebook
www.facebook.com For timely
news and additional information.

March 2021 Calendar

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|--|------------------------------------|---|---------------------------|--|-----------------------------------|--------------------------|
| | 1 7pm GARS Net | 2 7:30pm GEARS Net | 3 | 4 7pm PARS Net 7:30pm Simplex Net | 5 | 6 |
| 7 8pm OARS Net | 8 7pm GARS Net 8pm ARES Net | 9 7:30pm GEARS Net 7pm ARES meeting | 10 | 11 7pm PARS Net 7:30pm Simplex Net | 12 7pm GARS & OARS Meetings | 13 |
| 14 8pm OARS Net | 15 7pm GARS Net 8pm ARES Net | 16 7:30pm GEARS Net | 17 GEARS Board Mtg. | 18 7pm PARS Net 7:30pm Simplex Net | 19 7pm GEARS Meeting online | 20 |
| 21 8pm OARS Net 2pm GEARS Antenna Workshop | 22 7pm GARS Net 8pm ARES Net | 23 7:30pm GEARS Net | 24 | 25 7pm PARS Net 7:30pm Simplex Net | 26 | 27 9am OARS Breakfast |
| 28 8pm OARS Net | 29 7pm GARS Net 8pm ARES Net | 30 7:30pm GEARS Net | 31 | | | |

VEC Testing, FCC License Exam available by appointment. For information or registration call Tom Rider, W6JS 514-9211

Chico Breakfast Canceled until things settle down with the COVID-19 virus.

GEARS Board Meeting 2nd Saturday online.

OARS Meeting Second Friday of the month, TBD (To Be Determined)

GARS Meeting Second Friday of the month, TBD

Butte ARES Meeting 3rd Tuesday, TBD Contact Dale Anderson, KK6EVX 826-3461 for more information.

GEARS Meeting, third Friday of the month, online till further notice pm, meeting at 7:00 pm.

OARS Breakfast 4th Saturday of the month TBD

NETS:

OARS Club Net Sunday 8pm 146.655 Mhz - PL 136.5

GARS Club Net:Monday,7:00 pm 147.105 MHz + PL 110.09

Butte ARES Net Mondays 8pm 145.290 MHz - PL 110.9

Yuba Sutter Club Net Monday 7pm 146.085 MHz + PL 127.3

GEARS Club Net Tuesdays 7:30 PM 146.850 MHz - PL 110.9

PARS Club Net Thursday 7pm 145.290 - PL 110.9

Simplex Net Thursday 7:30 p.m. 146.52 no tone

Yuba Sutter ARES Net Thursdays 7pm 146.085 MHz + PL 127.3

Sacramento Valley Traffic Net Nightly 9:00 PM 146.850 MHz - PL 110.9

GEARS Repeaters

GEARS West on St. John

145.410 MHz PL is 123.0 Negative offset.

PL both input and output (CTSS)

GEARS East in Forrest Ranch

146.850 MHz Negative offset. PL 110.9 CTSS

440.650 MHz Plus offset, PL 110.9 Hz



Butte County CERT

By Kent Hastings WA6ZFY

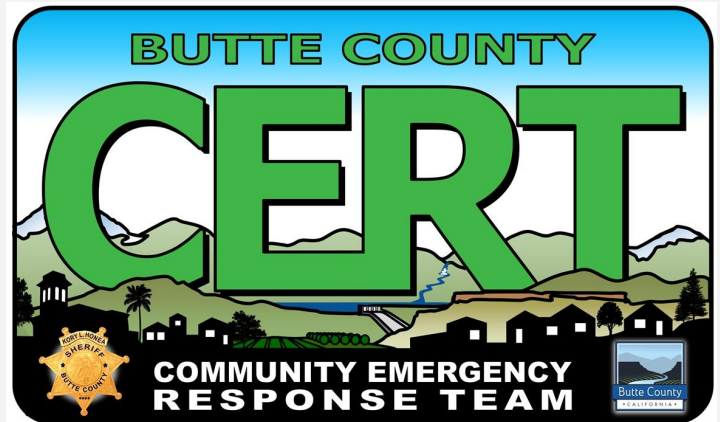
GEARS members know that some of us are also deployable by the Butte County CERT program. CERT organizes volunteers for a variety of missions helpful to the county. You may have heard references to upcoming CERT training events, listened to message traffic during deployments on our nets, or remember introductory presentations about CERT at our old Morrow Lane club meeting location.

CERT started in 1985 after L.A. fires and now has volunteers nationwide. The current incarnation of Butte County CERT started when the county EC, Grant Hunsicker, saw references to it during an incident and thought it would be a useful addition to the professional fire and police agencies, and the search & rescue team. He took training for it in Southern California and online FEMA courses. Thanks to Grant's organizing efforts, CERT is up and running, sponsored by the Butte County Sheriff's Office with Lt. Collins as our liaison. For more info about supporting, or joining and becoming deployable, visit <https://buttecountycert.com>

I took the basic CERT training in Pahrump, Nevada in 2014 along with the Southern Nevada ARES Club and other community members including a local broadcast radio personality. Butte County ARES is working with the county via CERT.

In addition to the basic CERT training on emergency medical treatment, risk assessments, fire suppression, light search & rescue, and animal control, Because fire knocked out power and cell towers, Butte County CERT also trains volunteers on the use of amateur and GMRS radio communications as vital alternatives. Here's a recent in-person radio training event CERT held about radio, <https://buttecountycert.com/event/radio-communication-basics/> Several GEARS members demonstrated off-grid stations.

Grant Hunsicker described a new radio-related program. "The Butte County CERT Program has developed a Get On The Air (GOTA) program designed to help fund emergency radio equipment to families that require help." A link labeled "Radio Help" may be reached here, <https://buttecountycert.com/radio-help/>



GEARS Century Members

Dale Anderson
Kent Hastings
Bennett Laskey
Tony Nasr
Scott Roberts

We thank these members for their extra support.

GEARS 2021 Dues

If you haven't already done so, please pay your GEARS 2021 Dues. Your contribution covers operating costs of our three repeaters, helps support ARES and helps keep amateur radio alive in this area. Dues are \$20, or \$30 for supporting membership. If you are able to contribute more you can choose a Century membership of \$100.

You can now pay online by PayPal at: <http://paypal.me/w6rhc>

Thank you for your support of GEARS.

Keeping Mother Nature at Bay

By Steve Vansickle, WB2HPR

The most important (and often, the largest physical part) of a radio system is its antenna. The fanciest and highest tech radio gear will not be able to do its job without a proper antenna. Besides being physically large, antenna systems can require a significant investment in time and money to design, construct, erect and maintain. When done properly, a well-engineered system can withstand the rigors of Mother Nature; rain, wind, heat and cold, ice loading and lightning are common factors which can alter antenna performance. Once erected, we cannot simply ignore these effects and expect that antenna systems will “take care” of themselves. During the service life of any antenna, out in the natural elements, it is necessary to routinely inspect the antennas themselves, including supporting masts, towers, ropes, halyards and catenary lines. Also, the feedline, insulators, and hardware need to be looked at.

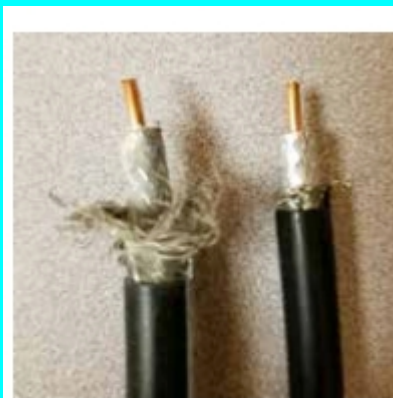
One of the most common problems reported can be traced to water incursion in the various connectors, producing corrosion and electro galvanic leakage paths that will severely degrade performance of the antenna – and the entire radio system performance will be degraded. Some symptoms could be excessive noise, interference to consumer products, poor efficiency, obvious physical damage and even no communication capability whatsoever. When water from condensation, or vapor is allowed to accumulate in connectors, it often migrates into the cable itself. The accumulated moisture can “wick” itself into the coaxial cable braid, as well as flow under wire insulation. When enough of this occurs, you will eventually experience some or ALL of those previously mentioned symptoms. Coax cable can become completely ruined by water.

Fortunately, preventing water incursion is readily achieved nowadays. There are several products which can be used to protect antenna connections, cable fittings, and the feedline (coax) itself. Also, with proper design, a well-engineered antenna system will use the MINIMUM number of connections, fittings and plugs in order to lessen the possibility of water vapor infiltration.

Also, in the case of external baluns and traps, it is desirable to provide “weep holes” in the insulated housings to prevent any accumulation of water droplets. For those instances where it is necessary to make a connection, I recommend the liberal use of a high quality PVC tape, such as Scotch Brand 33 tape. Properly applied with a 50 percent overlap of at least two layers, this will provide weather and UV protection to the plug, socket, or other connecting device. There are also other products available in the form of liquid tape, self vulcanizing rubber tape, and other insulating compounds in a malleable putty form. I generally do not use these, as I have found the Scotch 33, or the thicker 88 tapes to be entirely adequate.

If it becomes necessary to use more than tape, I always apply the tape over the connection, then, and only then, followed by the liquid tape or putty. (One brand name is “Coax-Seal”) These coatings are diabolically difficult to remove if you have to disconnect a plug while troubleshooting – but an initial covering of tape will allow relatively easy access once applied. The bottom line: the old saw: “an ounce of prevention...” holds true in this example. Proper design, construction and weather proofing will go a long way toward protecting the vital components of your station’s antennas. Of course, preventing water damage to the antenna components is only one facet of antenna maintenance. Proper installation will protect this large component of the radio system, and will increase the life of the antenna and improve its reliability.

Next month, choosing proper materials for antenna construction.



The result of water incursion:
Notice the oxidation of the shield on the Left - compared with bright shiny shield on the Right. Oxidation like this can cause significant noise on both transmit and receive. Samples are from a commercial installation, showing the result of improper weatherproofing.



10 Tips for Ham Radio Masters

By H. Ward Silver WA3MXV

Your ham radio license is really a license to study. Take advantage of every learning opportunity, including learning from your mistakes. (You'll have plenty!) Each problem or goof is also a lesson. Masters got to be masters by starting as raw recruits just like you and then making one improvement at a time, day in and day out. You may think that ham radio veterans surely have stores of secret knowledge that took years and years to acquire — knowledge that makes them the masters of all they survey. Certainly, the veterans have experience and expertise, but they also rely on simple principles that work in many situations. You can use these principles, too.



1) Listen to everything

Masters get more out of listening and monitoring than anyone else because they've learned the value of doing it. Every minute you spend listening is a minute learning and a minute closer to being a master, whether it's as a net control, a top contest operator, setting up a balloon tracker, or just giving out directions to the club meeting. Listen and learn how.

2) Learn how it works

Operating a radio and building an efficient, effective station are much easier if you know how the equipment works. Even if you're not terribly tech-savvy, take the time to get familiar with the basics of electronics and how your equipment functions. You will be much more effective if you learn the effects of controls and their adjustments. Learn how to make simple repairs to keep your station on the air.

3) Follow the protocol

Use the expected terms and give information in the form and order in which it is expected. When calling another station start with that station's call sign to alert that operator, then give your call once or twice as necessary. Use the recommended phonetics that others in your group prefer. In a competition, exchange your information in the same order published by the sponsor.

4) Keep your axe sharp

When asked what he would do if he had eight hours to cut down a tree, Abe Lincoln replied that he would spend the first six hours sharpening his axe. If you have battery-powered equipment, be sure that the batteries are charged and fresh. Make sure fuel for a generator is fresh. Lay out your "go kit" from time to time so that you are sure it's all there when you need it. Also, test your station's operation on all bands and modes. Keep your skills sharp so when they're needed on the air, you'll be ready.

5) Practice to make perfect

Even a sharp axe gets dull if it isn't used. Get on the air regularly, keeping in touch with conditions. An experienced operator knows what stations are active, from where, and when, as well as when important nets and on-the-air events take place. Even if you know the procedures by heart, check in to your local net each week. Take advantage of contests or special events to exercise your skills and make sure your equipment is working. Make operating your radio station a natural and comfortable activity by keeping yourself in shape with regular radio exercise.

6) Pay attention to detail

Masters know that the little things are what make the difference between 100 percent and 90 percent performance — or even between being on the air and off the air. The most expensive station isn't worth a nickel if it doesn't work properly when you need it. Waterproofing that connector completely or having your CQ sound just right really pays off in the long run. Masters are on the radio for the long run.

7) Know what you don't know

Take a tip from Mark Twain, who warned, "It's what you know for sure that just ain't so." If you get something wrong, don't be too proud to admit it. Find out the right way; track down the correct fact. People make their worst mistakes by ignoring the truth. Radio waves and electricity don't care about human pride. A master isn't afraid to

say, "I don't know."

8) Maintain radio discipline

When you are performing public service, whether in an emergency or not, practice your radio discipline: Know and follow the rules of the operation, follow the instructions of a net control station, transmit only when authorized and necessary, use plain language, and pay attention so you are ready to respond. Strive to make your operating crisp and clear so that anyone can understand.

9) Make small improvements continuously

Any improvement in the path between stations should not be neglected. Anything that makes your signal easier to understand — 1 dB (decibel) less noise received, 1 dB better audio quality, 1 dB stronger transmitted signal — makes the contact easier. Make your station and yourself better in small, regular steps and you'll get a lot more out of ham radio!



10) Help others and accept help from others

Sooner or later, you will encounter operators needing assistance. If they ask for help, offer your services. They may not be aware there is a problem, such as with poor audio, a distorted signal, or erratic operation. New operators may not know the right way or time to call another station. Before informing them of the problem, ask yourself how you would want to learn about a problem with your station. When describing the problem, be polite and be as clear as you can in your description. When other operators tell you that you have a problem, don't get mad or embarrassed. Thank them for bringing the problem to your attention and make them feel good about helping you. Ask them to help you troubleshoot. Ham radio is all about helping each other, on and off the air.

GEARS Club Officers:

| | |
|---------------------|-----------------------|
| President..... | Jim Matthews, K6EST |
| Vice-President..... | Paul Stewart, N6PAS |
| Secretary..... | Open |
| Treasurer..... | Kathy Favor, K6FAV |
| ARES..... | Dale Anderson, KK6EVX |
| Director..... | Bennett Laskey, K6CEL |
| Director..... | Kent Hastings, WA6ZFY |
| Director..... | Rich Astley, N3UOR |
| Past President..... | Tom Rider, W6JS |
| VEC..... | Tom Rider, W6JS |

GEARS Radiator past issues are available at:

<https://drive.google.com/drive/folders/0B-jPu0P0RkymZ2Q1WDR6THZLNmM?usp=sharing>

